

Folding Picnic Table

This lightweight table folds flat and is easily carried with its own built-in handle, so it is ideal for picnics and other outdoor events.

Furthermore, when well made, it is sufficiently sturdy and attractive to serve as an occasional table inside the house.

The cutting procedure is relatively simple, but care should be taken to follow our assembly instructions, as there are several different – and wrong – ways to assemble the components.



Component Specifications

All dimensions are in mm.

Part	Description	Quantity	Width	Thickness	Length	Part	Description	Quantity	Width	Thickness	Length
A	Table Top Slats	12	42	19	750	F	Leg Spreader	1	42	19	462
B	Table Legs	2	32	32	800	G	Leg Spreader	1	42	19	396
C	Table Legs	2	32	32	800	H	Carry Handle	1	25	Diam.	264
D	Table Top Bearers	2	32	32	520	J	Spacer Blocks	4	19	*	67
E	Table Top Bearers	2	32	32	520						

* Depends on slat spacing. Cut during construction.

NOTE: INNER TABLE TOP BEARERS (E) NOT VISIBLE ON THIS VIEW



Tool Requirements

1. ESSENTIAL Triton Workcentre and your power saw. Vertical drill press or electric drill and stand; set of Triton Woodbits; countersink bit; 5/8" spade bit or 16mm Triton Woodbit; small hand saw; screwdriver; square; measuring tape; pencil; sandpaper.

2. USEFUL Triton Sanding Disc; clamps; 2" x 1/4" bolt; 1/4" spanner; Forstner type drill bit and matching plug cutter (for drilling and plugging the screw holes — these items are available from specialist tool suppliers).

Construction Details

Material Shopping List

1. WOOD A lightweight softwood is best, and we used Western Red Cedar. Furniture grade Pine would also be suitable, if somewhat heavier.

Dressed sizes as follows:

42 x 19 — 6 @ 1.5m, 1 @ 0.9m
32 x 32 — 2 @ 1.8m, 1 @ 2.1m
25mm Dowel — 1 @ 0.3m (an offcut would be suitable)

2. FASTENING Countersunk wood screws, 8g x 1" — 1 box (56 required); zinc plated 1/4" Roofing Bolts and washers, 4 @ 2 1/2" (60mm), 2 @ 3" (75mm); 1/4" T-Nuts (Furniture Nuts are available from better hardware stores) — 6 required.

3. OTHER Scrap timber to make up a drilling location jig — see text, Step 2; filler for screw holes or extra timber from which to cut plugs.

4. FINISHING Unless the furniture is to be permanently left outdoors, an exterior grade finish is not required. We used Cabot's Danish Oil for ease of applying around and between the slats.

With the Workcentre in the crosscut mode, cut the twelve slats (**A**) to 750mm long. It is best to use a length gauge and stop block as shown in your Operating Manual to ensure identical lengths.

Cut spreader (**F**) to 462mm, and the other spreader (**G**) to 396mm.

From the 32 x 32mm material, cut 4 legs (**B,C**) to 800mm, and four bearers (**D,E**) to 520mm. Again, use your length gauge to ensure identical lengths.

Cut the dowel handle (**H**) to 264mm.

The ends of the legs **B & C** need to be bevel cut at an angle of 55 degrees. Remove the workstops from your table and fit the protractor set at 35 degrees (Note — the protractor is reversed when used in the crosscut

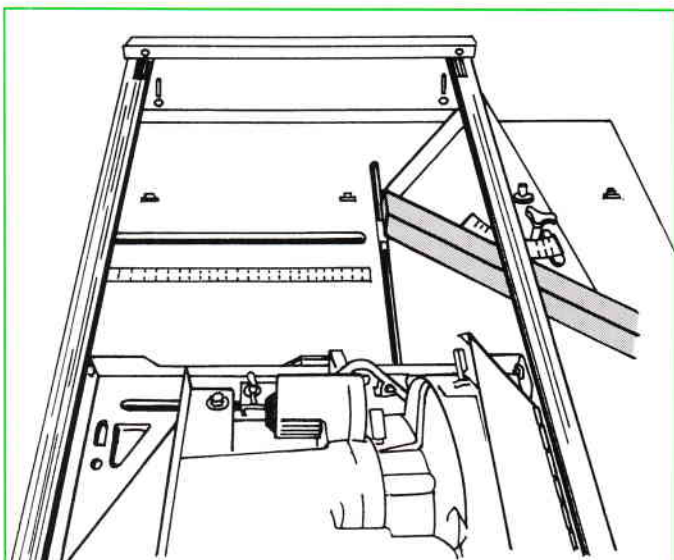


FIGURE 1

General Points

1. The timber sizes specified should be followed closely, otherwise the table components will not "nest" neatly inside one another when the table is folded.

2. A drill stand or drill press has been specified as "essential" in order that the holes for the pivot bolts line up accurately. If you don't have either, and plan to drill these holes with a hand held drill, very careful marking out and vertical drilling is necessary. Note that some dowelling jigs can assist in this operation.

mode, i.e. the scales are upside down when read from the switch box end). (Figure 1) When making the bevel cuts ensure that you do not overcut, thereby inadvertently shortening the legs.

2 Lay out six of the slats (**A**) on a flat surface, square up the ends, and mark lines as shown in Figure 2a. The inner pair of lines are for the screw holes, and the outer lines are a guide for later screwing of the slats to the bearers. Lay out the other six slats and mark as in Figure 2b. Use your square to ensure that your marked lines are at right angles to the slats.

Mark out the location of the 48 screw pilot holes (two holes per slat end) along the inner marked out lines on both sets of slats. The holes should be 11mm in from the slat edges, for equidistant spacing. Drill the screw holes.

It is helpful to make up a drilling location jig and stop block, as shown in Figure 3, to help keep all drill holes in line. It is also convenient at this stage to drill

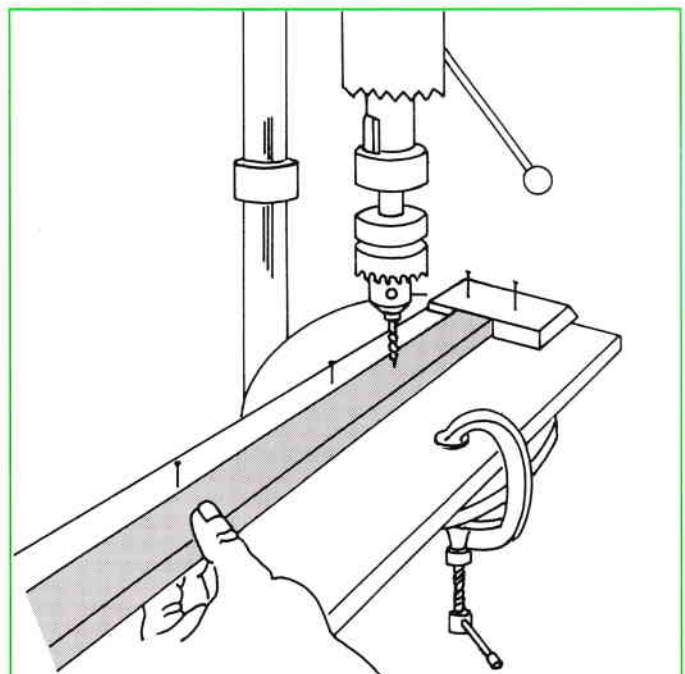
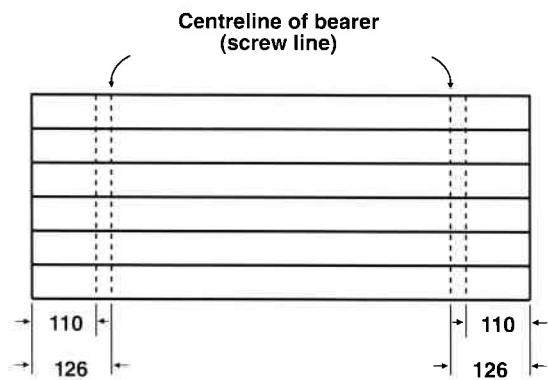
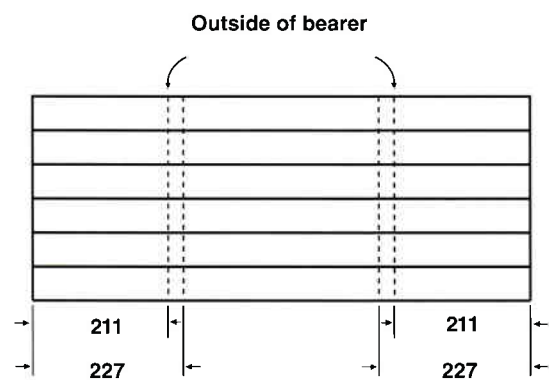


FIGURE 3



WIDE BEARERS (D)



NARROW BEARERS (E)

SLAT MARKING DIAGRAM (COMPONENTS A)

FIGURE 2a

FIGURE 2b

two holes 16mm in from each end of the spreaders (F & G). (Figure 8 shows their relative positions.)

If you intend to use wooden plugs to cover the screws, now is the time to drill over your guide holes with the Forstner bit. Countersink for the screw heads in the bottom of the plug holes. You will also need to cut 56 plugs with a matching plug cutter.

If you are not using wooden plugs then countersink all the screw holes, and consider using brass screws for better appearance and durability.

3 Mark, counterbore and drill the holes required for the roofing bolts into the legs (B & C), in pairs, locations as per Figure 4.

Note that when using either a Triton Woodbit, or a spade bit with a central spur, you need to make the

counterbores first. Bore deep enough so the head of the roofing bolt will be just below the surface. Note carefully the location of the counterbores! See also Figure 8.

Repeat with the bearers (D,E) as shown in Figure 5.

Finally, drill 1/4" (7mm Woodbit) holes about 15mm deep centrally in the ends of the dowel handle (H). The drill bit may tend to wander in the end grain, so secure the dowel in a drill stand vice if possible.

4 Set up the Sanding Disc and round over the upper ends of the legs, and if you wish, slightly round over both ends of the bearers for better appearance. If you don't have a sanding disc you will need to round over the ends by hand.

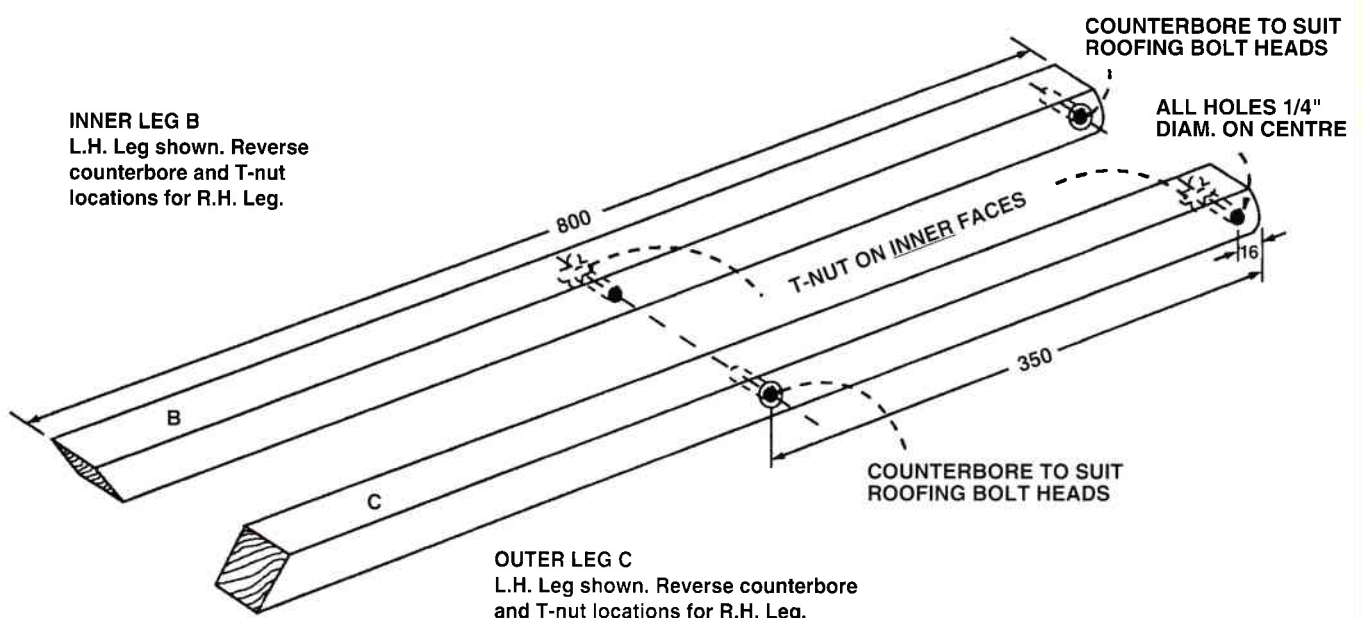


FIGURE 4

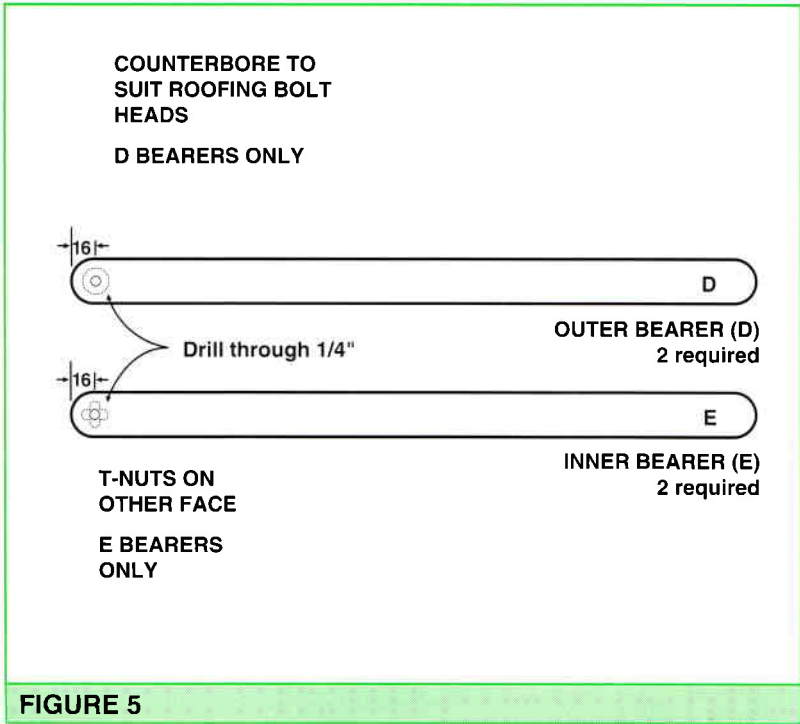


FIGURE 5

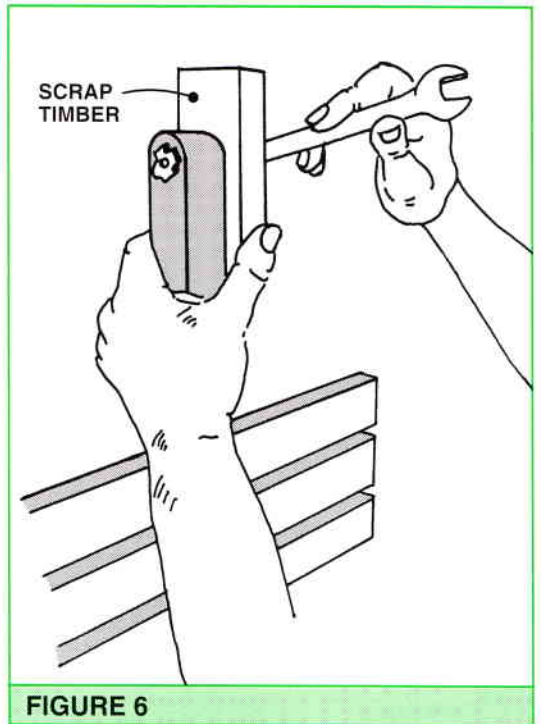


FIGURE 6

5 Install the T-Nuts on the inner sides of the legs and bearers, as in **Figure 4 & 5**. Also see **Figure 8**. You may have to counterbore slightly with a larger size drill to receive the body of the T-Nut. Use a spacer block, a 1/4" bolt and a spanner to pull them in as flush as possible with the surface. (**Figure 6**)

Clamp the ends of your material firmly with wooden blocks and G-clamps either side of the T-Nuts if the wood shows any tendency to split when pulling in the nuts. Try to pull the T-Nuts in so that they are reasonably flush with the surface of your material.

6 For each half of the table, lay out the slats on top of the bearers as in **Figures 7a** and **7b**. Line up the outside line marked on the slats with the outside of the bearer, and after checking that

the bearers are the correct distance apart, drill and screw on the innermost slat, using only two screws – one in each end – for the time being.

Screw on the outermost slat as close to the rounded end of the bearer as possible, again fitting only one screw per end, and making sure the bearers remain parallel. Square up the assembly carefully, and add the second screws.

Now fit the remaining slats, spaced equally, making sure their ends are in line, and fitting all the screws. Repeat with the other half of the table. We used a piece of scrap (about 10mm thick) to check the spacing between each slat. This slat gap may vary in your construction, depending upon how far from the end of the bearers you have fixed the outermost slat, as well as the true width of your slat material.

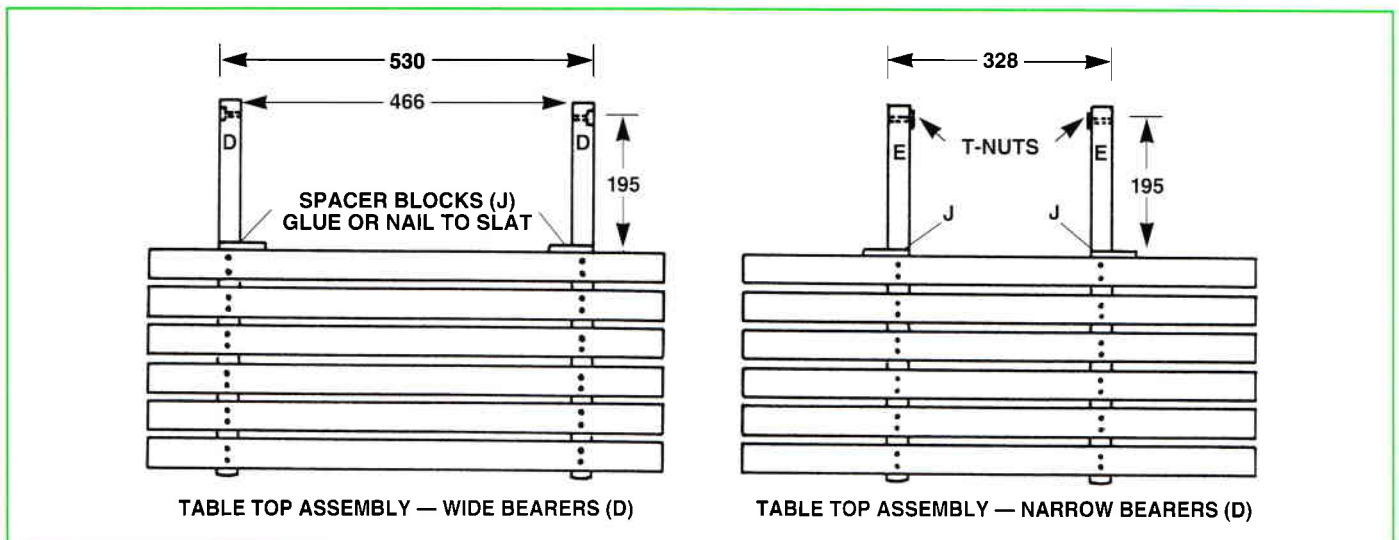
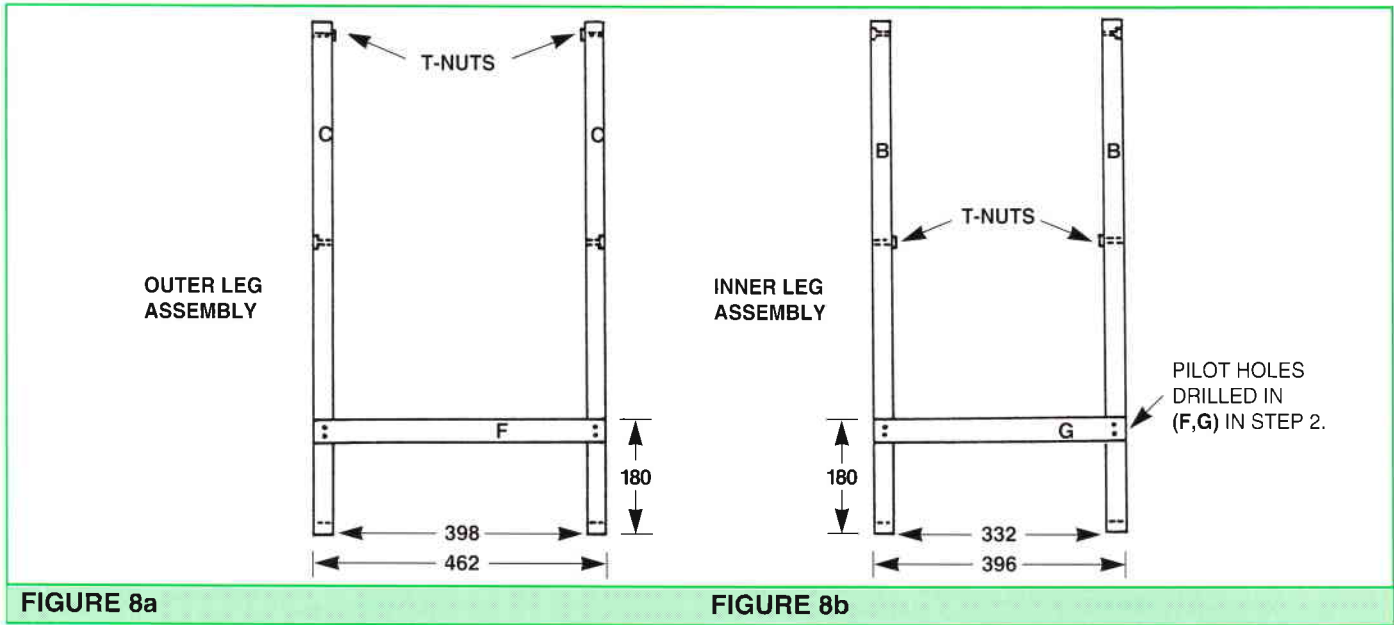


FIGURE 7a

FIGURE 7b

Construction Details



7 Make up each pair of legs, as shown in **Figures 8a** and **8b**, with the T-Nuts to the inside. Drill and screw on the spreaders (**F & G**), making sure the assemblies are square and parallel.

8 It is most convenient to coat the sub-assemblies with the finish of your choice at this stage, before assembling the table any further. If using wood-putty to fill your screw holes, apply one coat of finish, sand back, fill the holes with your putty, and then apply the second coat.

In our example we glued in the wooden plugs, trimmed and sanded them flush, and applied two coats of Cabot's Danish Oil.

9 Assemble each half of the table. Lay out the wider pair of legs, spreader on top, and place the table top half with the wide bearers over it as in **Figure 9a**. Put a washer between the bearer and the leg (to keep the parts from rubbing together), and screw a 2 1/2" roofing bolt through the matching holes on each side, into the T-Nut.

If your counterbores are too deep you may find the thread of the bolt protrudes slightly through the nut; you must hacksaw or file if off, or it will catch on and damage the other components as the table folds up.

Make up the other half with the narrow legs and bearers in the same way (**Figure 9b**), but this time place the dowel handle between the T-Nuts and using the 3" bolts, screw them right through the nuts so that they enter the holes drilled in the ends of the dowel, holding it in place.

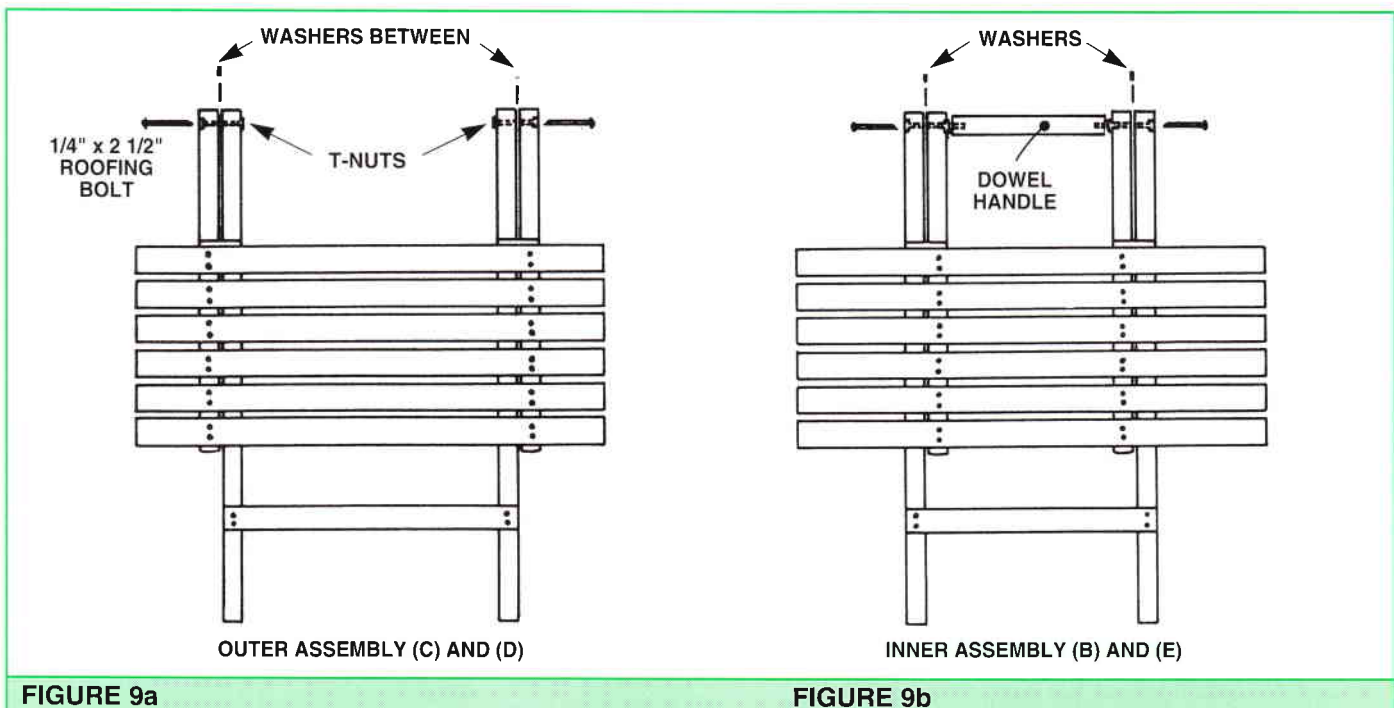


FIGURE 9a

FIGURE 9b

10 The next step is to connect the two halves at the pivot. Turn over the wider assembly so that the table top and spreader are downwards. The angled cuts on the bottoms of the legs should be facing upwards. Place the narrow assembly on top so that the legs nest inside, with the tops in line. **Figure 10.**

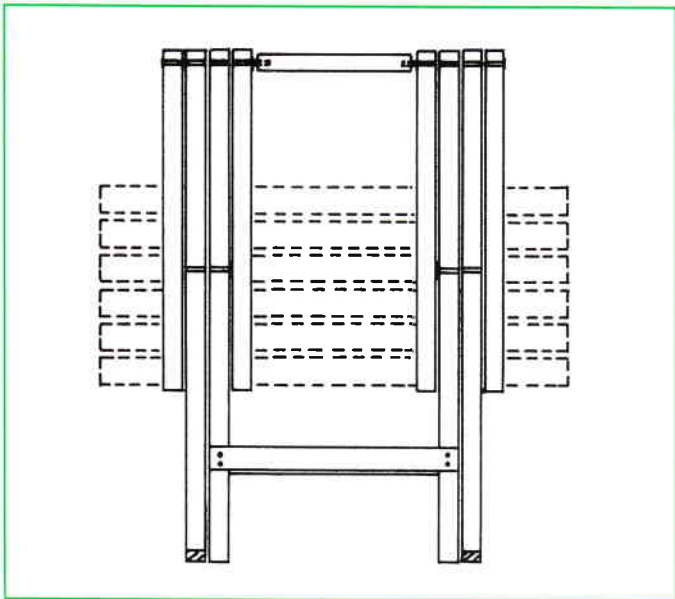


FIGURE 10

Fold back the table top out of the way, lift the legs slightly and fit the remaining 2 1/2" pivot bolts, with a washer between the legs to prevent them rubbing together. Screw the bolts fully into the T-Nuts so that the heads are below the surface, and remember you must cut off any bolt threads which protrude through the nut, or the table cannot fold flat.



FIGURE 11

11 To unfold the table from the flat position, lift each half of the table top and push them together until they meet. **Figure 11** (the table inverted) shows the completed assembly.

If you find that the bolts are tight in the legs and bearers, and turn as you unfold or fold the table, you may wish to file or drill the holes very slightly oversized, and apply "Loctite" or similar to the threads of the bolts where they fasten into the T-Nuts.

12 Use a small handsaw to cut the small spacer blocks (**J**) from scrap material, 67mm long and as thick as your slat spacing. Fit them as shown in **Figure 7**, gluing them to the outer and inner bearers each side, and to the insides of their respective inner slats.

The blocks not only space the central slats apart, but their inner ends align the sides of the table top and prevent sideways movement. The blocks can be easily held in place by the vice-effect of the table top halves, while the glue dries.

You are now the owner of a stable, lightweight, and good-looking picnic table.